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# Questions and Answers About Breast Calcifications

## 1. What are calcifications?

Calcifications are small calcium deposits in the breast that can be detected only by mammography (breast x-ray). They are divided into two categories, macrocalcifications and microcalcifications.

Macrocalcifications are coarse calcium deposits that most likely represent degenerative changes in the breasts, such as aging of the breast arteries, old injuries, or inflammations. These deposits are associated with benign (noncancerous) conditions and do not require a biopsy (surgery that removes the tissue for examination under a microscope). Macrocalcifications are found in about 50 percent of women over the age of 50, and in about 10 percent of women under the age of 50.

Microcalcifications are tiny specks of calcium in the breast. These minute calcifications are usually in an area of rapidly dividing cells. When many microcalcifications are seen in one area, they are referred to as a cluster and they may indicate a small cancer. About half of the cancers detected by mammography appear as a cluster of microcalcifications.

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## 2. What if microcalcifications are found on a mammogram?

An area of microcalcification that is seen on a mammogram does not always mean that cancer is present. In some cases, the microcalcifications do not even indicate a need for a biopsy. Instead, a doctor may advise a followup mammogram within 3 to 6 months. In other cases, the microcalcifications are more suspicious and a biopsy is recommended.

## 3. How can a breast biopsy be done if there is no lump?

A mammogram may show an area of abnormal tissue that is too small to be felt. In this case, a procedure called a "localization" is used to help the surgeon locate the suspicious area to be removed during the biopsy. Using x-rays for guidance, a radiologist inserts a needle or fine wire into the area of microcalcifications. Once the needle or wire is in place, the surgeon performs the biopsy, often under local anesthesia.

## 4. Why is a biopsy done if there is no lump?

Breast cancer may be present even in the absence of a lump. A biopsy is done to find breast cancer in its earliest stage, before it has begun to spread and when it is most curable. In general, breast cancers discovered as a result of mammography tend to be small, and they are ideal for treatment with lumpectomy and radiation, treatment that preserves the breast. Women who have small breast cancers that have not spread to the underarm lymph nodes or elsewhere have a 10-year survival rate of more than 90 percent.

For additional information about cancer, write to the Office of Cancer Communications, National Cancer Institute, Bethesda, MD 20892, or call the toll-free telephone number of the Cancer Information Service at 1-800-4-CANCER. (Spanish-speaking staff members are available.)

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